Attorney Docket No. 1008-022US01

6517351102

RECEIVED CENTRAL FAX CENTER

SHUMAKER & SIEFFERT, P.A.

United States Patent Application

JAN 3 0 2008

COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor I hereby declare that my residence, post office address and citizenship are as stated below next to my name, and that I believe I am an original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention cutilled: ADAPTIVE MODULATION FOR MULTI-ANTENNA TRANSMISSIONS WITH PARTIAL CHANNEL KNOWLEDGE.

ANTENNA TRANSMISSION	IS WITH PARTIAL CHANNEL R	NOWLEDGE		OK MOP1
c. Was (in the case of a PC	2004 as application serial no. 10/7 F-filed application) described and o which I solicit a United States pate	claimed in international so	if applicable) or filed and as amended on	(if any),
I hereby state that I have review any amendment referred to about	ved and understand the contents of ve.	the above-identified specifica	ation, including the claims, as an	nended by
I acknowledge the duty to disci Regulations, § 1.56 (attached h	ose information which is material ereto).	to patentability of this applica	tion as defined in Title 37, Code	of Federa
that of the application on the bata. In no such applications have be such applications have be	een filed as follows:	application for patent or inve	ntor's certificate having a filing	inventor's date before
FOREIG	N APPLICATION(S), IF ANY, C	LAIMING PRIORITY UNDI	ER 35 USC § [19	
COUNTRY	APPLICATION NUMBER	DATE OF FILING (day, month, year)	DATE OF ISSUE (day, month, year)	
ALL CORDIO	11 1 1772 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1			·
ALL POREIG	N APPLICATION(S), IF ANY, FI		TY APPLICATION(S)	
COUNTRY	APPLICATION NUMBER	DATE OF FILING (day, month, year)	DATE OF ISSUE (day, month, year)	·
I hereby claim the benefit of any of the claims of this application	United States and PCT internation is not disclosed in the prior United	nal application(s) listed below States application in the man	and, insofar as the subject matt	er of each

of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, § 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

U.S, APPLICATION NUMBER	DATE OF FILING (day, month, year)	STATUS
60/499,754	03 September 2003	Expired
		·

6517351102



	28863	
PATEN	TTRADEMARK OFFIC	E

Steven J. Shumaker	Rcg. No. 36,275	Kelly P. Fitzgerald	Reg. No. 46,326
Kent J. Sieffert	Reg. No. 41,312	H. Sanders Gwin, Jr.	Reg. No. 33,242
Jason D. Kelly	Reg. No. 54,213	Kari H. Bartingale	Reg. No. 35,183
Darcy L. Grunwald	Reg. No. 56,902	Daniel T. Lund	Reg. No. 58,614
Michael J. Ostrom	Reg. No. 58,730	Jennifer M.K. Rogers	Reg. No. 58,695
Jessica H. Kwak	Reg. No. 58,975	Albert W. Vredeveld	Reg. No. 60,315
Raymond R. Berdie	Reg. No. 50,769		•

as my/our attorney(s) and/or patent agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith.

I hereby authorize them to act and rely on instructions from and communicate directly with the person/assignee/attorney/firm/ organization who/which first sends/sent this case to them and by whom/which I hereby declare that I have consented after full disclosure to be represented unless/until I instruct Shumaker & Sieffert, P.A. to the contrary.

Please direct all correspondence in this case to:

SHUMAKER & SIEFFERT, P.A. 1625 Radio Drive, Suite 300 Woodbury, Minuesota 55125 Telephone: 651.735.1100 Facsimile: 651.735,1102

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may icopardize the validity of the application or any patent issued thereon.

	Full Name	Family Name	First Given Name	Second Given Name
	Of Inventor	Giannakis	Georgios	B.
,	Residence	City	State or Foreign Country	Country of Citizenship
	& Citizenship	Minnetonka	Minnesota	United States of America
.	Post Office Address	Post Office Address 2561 Abbey Hill Dr.	City Minnetonka	State & Zip Code/Country MN 55305/USA
Signa	ature of Inventor	(C) uma	De	ate: Jan 28, 2008

Ifull Name Of Inventor	Family Name Zhou	First Given Name Shengli	Second Given Name
Residence	City	State or Foreign Country	Country of Citizenship
& Citizonshi	Mansfield	Connecticut	Peoples Republic of China
Post Office	Post Office Address	City	State & Zip Code/Country
Address	19 Fort Griswold Lane	Mansfield	CT 06278/USA
Signature of Invent	or;	Date:	

OT

§.1.56 Duty to disclose information material to patentability.

- (a) A patent by its very nature is affected with a public interest. The public Interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is canceled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is canceled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:
 - (1) prior art cited in search reports of a foreign patent office in a counterpart application, and
- (2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.
- (b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and
 - (1) It establishes, by itself or in combination with other information, a prima facic case of unpatentability of a claim;
 - (2) It refutes, or is inconsistent with, a position the applicant takes in:
 - (i) Opposing an argument of unpatentability relied on by the Office, or
 - (ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

- (c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:
 - (1) Each inventor named in the application:
 - (2) Each attorney or agent who prepares or prosecutes the application; and
- (3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignce or with anyone to whom there is an obligation to assign the application.
- (d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.

Attorney Docket No. 1008-022US01

SHUMAKER & SIEFFERT, P.A.

United States Patent Application

COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor I hereby declare that my residence, post office address and citizenship are as stated below next to my name, and that I believe I am an original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled: ADAPTIVE MODULATION FOR MULTI-ANTENNA TRANSMISSIONS WITH PARTIAL CHANNEL KNOWLEDGE

c. was (in the case of a PCT-	004 as application scrial no. 10/7 filed application) described and chich I solicit a United States pater	laimed in international n	
I hereby state that I have reviewe any amendment referred to above		the above-identified spe-	cification, including the claims, as amended by
l acknowledge the duty to disclor Regulations, § 1.56 (attached her		o patentability of this ap	plication as defined in Title 37, Code of Federal
I hereby claim foreign priority be certificate listed below and have that of the application on the bas a. M no such applications have b. Such applications have been such applications.	also identified below any foreign is of which priority is claimed: been filed.	es Code, § 119/365 of an application for patent or	ny foreign application(s) for patent or inventor's inventor's certificate having a filing date before
FOREIGN	APPLICATION(S). IF ANY, C	LAIMING PRIORITY (NDER 35 USC § 119
COUNTRY	APPLICATION NUMBER	DATE OF FILING (day, month, year)	DATE OF ISSUE (day, month, year)
		(day, moral, year)	(day, mortal, year)
ALL FOREIGN	<u> </u>	 LED BEFORE THE PR	IORITY APPLICATION(S)
COUNTRY	APPLICATION NUMBER	DATE OF FILING	DATE OF ISSUE
		(day, month, year)	(day, month, year)
of the claims of this application i 35. United States Code, § 112, 1 § 1.56(a) which occurred between	s not disclosed in the prior United acknowledge the duty to disclose in the filing date of the prior appli	States application in the material information as cation and the national of	below and, insofar as the subject matter of each a manner provided by the first paragraph of Title defined in Title 37, Code of Federal Regulations or PCT international filing date of this application
U.S. APPLICATION NUM	BER DATE OF FILING	(day, month, year)	STATUS
60/499,754	03 September 2003		Expired

1 hereby appoint Practitioners at Customer Number 28863



Steven J. Shumaker	Reg. No. 36,275	Kelly P. Fitzgerald	Reg. No. 46,326
Kent J. Sieffert	Reg. No. 41,312	H. Sanders Gwin, Jr.	Reg. No. 33,242
Jason D. Kelly	Reg. No. 54,213	Kari H. Bartingale	Reg. No. 35,183
Darcy L. Grunwald	Reg. No. 56,902	Daniel T. Lund	Reg. No. 58,614
Michael J. Ostrom	Reg. No. 58,730	Jennifer M.K. Rogers	Reg. No. 58,695
Jessica H. Kwak	Reg. No. 58,975	Albert W. Vredeveld	Reg. No. 60,315
Raymond R. Berdie	Reg. No. 50,769		

as my/our attorney(s) and/or patent agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith.

I hereby authorize them to act and rely on instructions from and communicate directly with the person/assignce/attorncy/firm/ organization who/which first sends/sent this case to them and by whom/which I hereby declare that I have consented after full disclosure to be represented unless/until I instruct Shumaker & Sieffert, P.A. to the contrary.

Please direct all correspondence in this case to:

SHUMAKER & SIEFFERT, P.A. 1625 Radio Drive, Suite 300 Woodbury, Minnesota 55125 Telephone: 651.735.1100

Facsimile: 651.735.1102

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name	Family Name	First Given Name	Second Given Name
Of Inventor	Giannakis	Georgios	B.
Residence	City	State or Foreign Country	Country of Citizenship
& Citizenship	Minnetonka	Minnesota	United States of America
Post Office	Post Office Address	City	State & Zip Code/Country
Address	2561 Abbey Hill Dr.	Minnetonka	MN 55305/USA
ignature of Invento	or:	De	atc:

Shengli	·
State or Foreign Country Connecticut	Country of Citizenship Peoples Republic of China
City Mansfield	State & Zip Code/Country CT 06278/USA
There Date:	1/15/2008
_	Connecticut City Mansfield

§ 1.56 Duty to disclose information material to patentability.

- (a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is canceled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is canceled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:
 - (1) prior art cited in search reports of a foreign patent office in a counterpart application, and
- (2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.
- (b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and
- (1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim;
 - (2) It refutes, or is inconsistent with, a position the applicant takes in:
 - (i) Opposing an argument of unpatentability relied on by the Office, or
 - (ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

- (c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:
 - (1) Each inventor named in the application:
 - (2) Each attorney or agent who prepares or prosecutes the application: and
- (3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.
- (d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.